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A PUBLICATION CONCERNED WITH
NATURAL HISTORY AND CONSERVATION



THE OTTAWA-FIELD NATURALISTS'



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— Founded 1879 —

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Objectives of the Club: To promote the appreciation, preservation and conservation of Canada's natural heritage; to encourage investigation and publish the results of research in all fields of natural history and to diffuse information on these fields as widely as possible; to support and co-operate with organizations engaged in preserving, maintaining or restoring environments of high quality for living things.

Club Publications: THE CANADIAN FIELD-NATURALIST, devoted to publishing research in natural history; TRAIL & LANDSCAPE, a non-technical publication of general interest to local naturalists. THE SHRIKE, a local birding newsletter, is available by separate subscription.

Field Trips, Lectures and other natural history activities are arranged for local members. See "Coming Events" in this issue.

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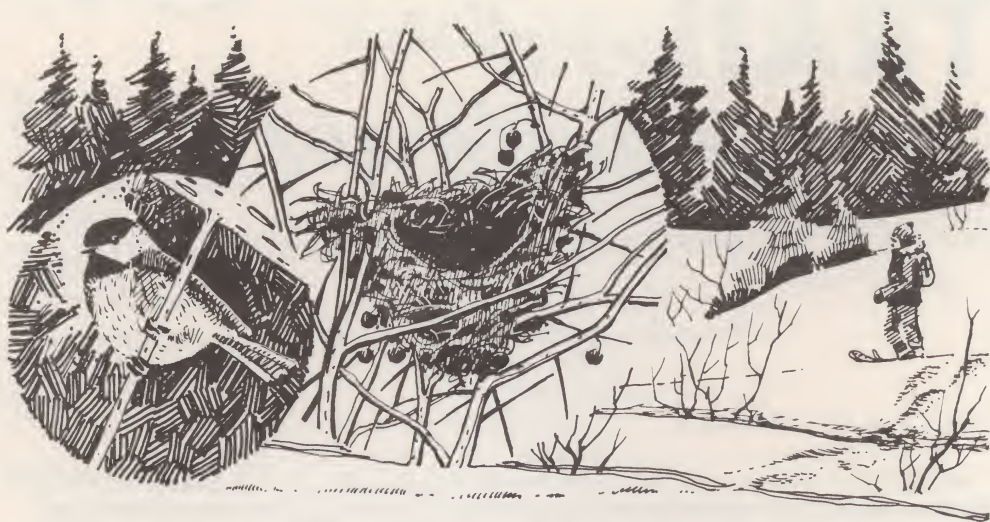
TRAIL & *Landscape*

Published by THE OTTAWA FIELD-NATURALISTS' CLUB

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Collage of Winter

Claudia Smith

New Year's Day, cold and grey-skyed, with the snow-piled woods beckoning, we buckled on snowshoes, and with a black collie trailing our big snow prints we went into the forest. Our eyes and ears were keen to catch and appreciate what nature had to show us.

A sudden explosion of wings up out of the snow was the first gift. A grouse hurtled off into a nearby stand of pines. We went to examine its nesting spot and saw a hollow in the snow with fingered wing marks on each side just in front of it. If we hadn't seen the bird fly off, I would have thought the pattern was the record of a small owl-and-prey scene.

We came to an area reforested with pine trees and heard the silver twitterings of Pine Grosbeaks. A large flock of them was feeding, and their wonderful reddish hue was beautiful to see.

We passed tiny-twiggged birds' nests nestled into hawthorn trees. They were capped with mounded puffs of snow. On many trees, ragged caterpillar tents twisted limply in the wind. Their movements often caught my eye, and thinking it was a bird I'd turn quickly, only to be disappointed.

We came upon the straight, purposeful line of a fox track and followed as it headed for the beaver pond. The fox detoured to circle a bush or to investigate under a juniper where the

snow had been trampled by many long rabbit feet. He then trotted straight across the ice to the beaver lodge, humped and rounded under the snow. He circled it, climbed on top of it, and then headed off to better hunting places, as they indeed proved to be.

The drowned trees of the beaver pond had bracket or artist's fungus (*Fomes*) ledging out from them in many layers and at different heights. The ledges were loaded with wonderful piles of snow. Near an especially beautiful bracket, a shiny, deep mahogany coloured one, we saw an old dried mushroom lying on the snow. We assumed that it must have blown out of its place in a tree crotch where a squirrel had put it in the fall. More mushrooms were found in many trees, hanging dried and twisted into curled shapes.

A Hairy Woodpecker tapping at a nearby tree took no notice of us. Nuthatches and Chickadees appeared and disappeared as we made our way along the fox's trail. Snowshoe hare tracks crisscrossed everywhere. One had met its demise where the fox track ended at a flurry of tracks and a small spot of blood. Leaving a winding set of entrails on the snow, the fox had continued on its way.

Farther on, near a snowy entrance to a rock den, we found more rabbit entrails and a sad, round fluff of a tail. Nearby on a high rock ledge was a rounded, iced spot in the snow where the fox must have sat and surveyed his domain, licking his chops and feeling satisfied. He had had a good night.

We tramped on, and soon came upon a ditch-like trail in the snow that was stained yellow at various intervals. We found a porcupine at the end of this trough trail, snuggled into a hollow in the trunk of a tall old tree. His trail also went to a cedar tree surrounded by many chewed branches lying on the snow. Rabbits had obviously been partaking of what he was finished with.

On the homeward trek we crossed a lightly snow-dusted patch of ice covering a small brook. Mink tracks peppered the ice edges as if one had been looking for open water. We also saw squirrel tracks connecting tree to tree. The tracks of mice on the fine snow looked as though some small tanks had scurried along, dragging their tails between their treads.

We reached home feeling elated by our sightings, and then we realized that except for the spiky tip of a porcupine's tail, we had not seen one four-legged animal. In spite of this, we had had many glimpses of wildlife in the woods. Summer walks usually show few definite signs of the abundance of wildlife, but winter walks bring into clear view the evidence of the busy, constant struggle for survival.

The OFNC Lodge at Beattie Point

Vi Humphreys

At a dinner meeting on April 21, 1949, it was announced that The Ottawa Field-Naturalists' Club had a 10-year lease for an acre of property overlooking Lake Deschenes at Beattie Point, and that a building would be constructed by volunteer effort to serve as a base for field trips of the Club.

The idea of acquiring a field headquarters and shelter for excursions began with discussion sparked by Mr. A. E. (Fred) Bourguignon at a Council meeting. Herb Groh, Stanley Hicks, A. W. Banfield and R. M. Anderson outlined similar projects undertaken with good results by other natural history clubs. Mr. Bourguignon revealed an offer of a ten-year lease at the legal minimum fee of \$1.00 on a lot near Beattie Point (Crystal Bay) on Lake Deschenes. Permission had been obtained to construct a building on this lot, on the understanding that it would be removed at the termination of the lease. Mr. Bourguignon estimated the cost of construction of an 18-foot by 30-foot building at about \$550. He reported that donations of lumber by various companies had greatly reduced the cost, and he was sure that further contributions might be expected.

Council requested Mr. Bourguignon to appoint a committee of his choosing, and authorized it to make an expenditure of \$300.00 for construction of a building on the leased property.

Mr. Fleming, the owner of the land, promised club members access to the total area of 50 acres he possessed. Conditions agreed upon were (1) the lot was to have access to a road allowance, (2) the club would undertake reforestation of Mr. Fleming's land on Lake Deschenes, at the rate of 1000 to 2000 trees annually, and (3) Mr. Fleming would guarantee not to turn cattle on to the land.

A fee of \$18 was paid for a \$1000 three-year fire insurance policy, and a public liability policy for \$25,000 - \$50,000 was secured at \$6 per year premium.

May 24, 1949, found the new lodge ready for the grand opening ceremony which took place at 11 a.m. with 60 members present. E. Grant Anderson, chairman of the Excursions and



Opening Day
picnic

Club members
at the lodge
in 1949



Macoun Field
Club members
at the lodge



Lectures Committee, gave a brief account of the building of the lodge and introduced the president, Dr. Pauline Snure, who, on turning a key, declared it officially open to members and their friends. Following a picnic lunch, two field parties were formed, one under the leadership of Herb Groh and the other under Fred Bourguignon, to explore the surrounding fields, woods and shore.

The area was used for regular club outings; by special study groups for ferns, birds, insects, amphibians; by the Macoun Field Club members for their outings; by members and friends. A Girl Guide company once camped on the grounds. On weekends, a roster was kept with members acting as hosts to greet old members and in particular to welcome new ones. A number of new members joined during this period.

Many hours of hard work went into the lodge and area, and no one worked harder than Fred Bourguignon, who gave a great deal of time, energy, and financial help to this project. His friendliness and good humour were always felt and appreciated. A number of members helped, in particular Doug and Connie Savile, Mary Stuart, Verna Ross (McGiffin), John and Ruth Arnold, Dr. Walt Groves.

Painting had to be done both inside and out, a comfort station built, shelves made to house a reference library and equipment, and some conifers planted. In 1950, an outdoor fireplace was constructed (the remains of which still stand today), and barbecues, corn roasts, and picnics were enjoyed by members, along with the garter snakes which inhabited the fireplace area and always seemed to come out at eating time to create an uneasy feeling for someone new to nature.

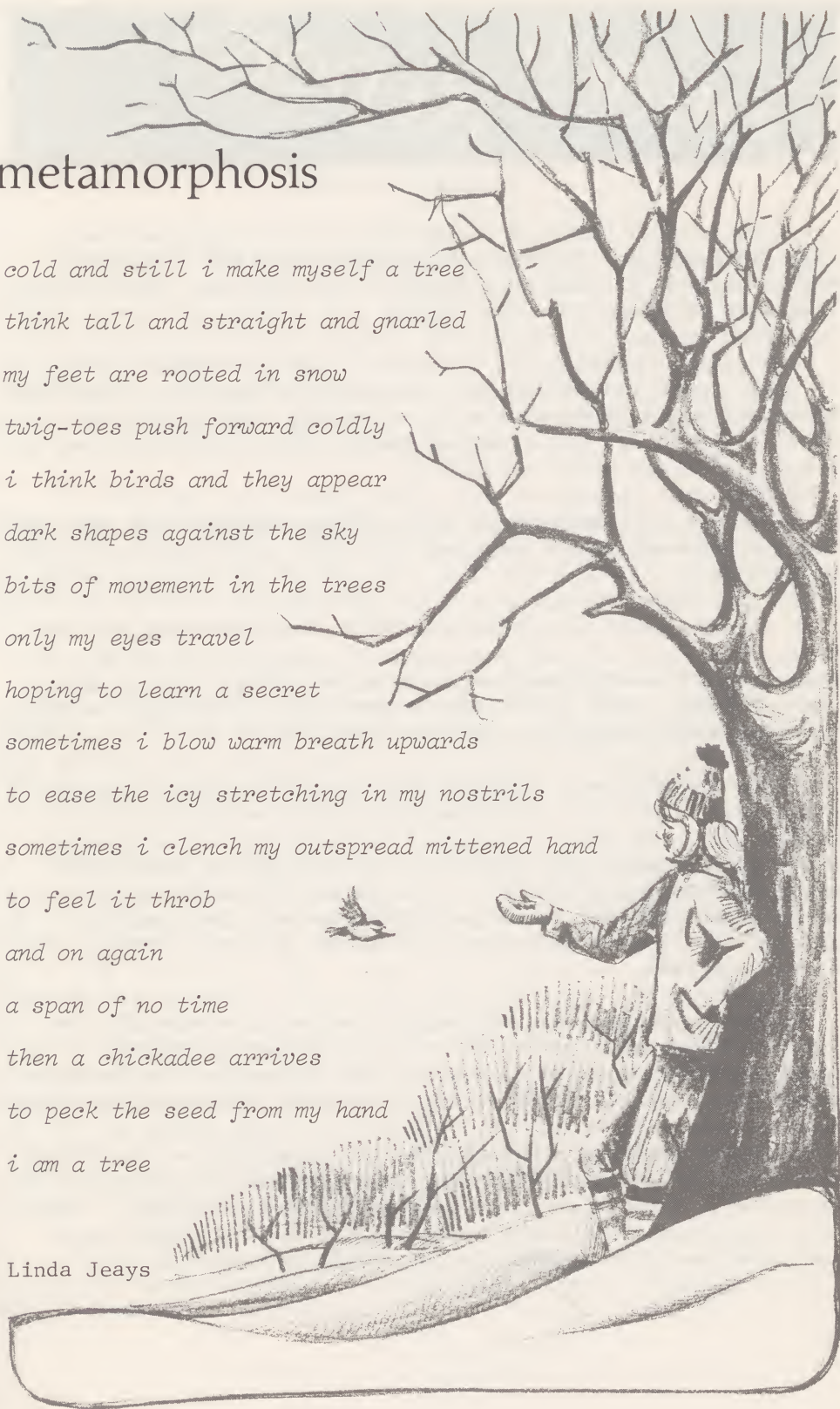
Towards the middle of the 1950's more cars were appearing and members were exploring areas farther afield. The shore area was being developed, and the lodge began to prove less of an attraction. In view of the declining interest, and the rise in local property value, it was decided to terminate the lease and vacate the property.

As I think about that period in our Club's story, warm memories flood back: the ever-changing views of the Gatineau Hills; sunsets on the Ottawa River; the copse, so productive of small passerines, especially warblers; the maple woods with their wildflowers and thrushes; the marshes and ponds with buzzing insects, singing frogs and toads; Bobolinks and Meadowlarks nesting below the lodge; Short-eared Owls flying low over the open fields; weasels in the stone pile; the far stream with its Phalaropes and Shovelers; the mellow fall days with colouring leaves, honking geese, goldenrod and asters, brilliant red cardinal flowers and blue gentian -- and the good times and good companions at our Beattie Point Lodge.

metamorphosis

*cold and still i make myself a tree
think tall and straight and gnarled
my feet are rooted in snow
twig-toes push forward coldly
i think birds and they appear
dark shapes against the sky
bits of movement in the trees
only my eyes travel
hoping to learn a secret
sometimes i blow warm breath upwards
to ease the icy stretching in my nostrils
sometimes i clench my outspread mittened hand
to feel it throb
and on again
a span of no time
then a chickadee arrives
to peck the seed from my hand
i am a tree*

Linda Jeays



Council Report

Peter Hall

One hundred years is a long time for an organization to stay in business. This is particularly true for a club that depends almost totally on volunteers to carry out the functions that keep it going from day to day.

It also says much for the love of natural history shared by many in the Ottawa region. Many have given their spare time to type Trail & Landscape, mail out renewal slips, sit on Council and do all the other necessary jobs, simply because they felt it was worth the effort.

The Council appreciates this effort and asks that all past and present members of the Club join with us in the Centennial Celebrations.

Council would also like to remind those who have not yet done so, to send off those letters to regional politicians to help save Ottawa-Carleton's conservation areas. The preservation of these areas is of utmost importance if we hope to make the next hundred years as good as the last.

The activities of Council over the Fall centred around plans for Centennial activities, but other business also demanded time. It came to Council's attention that the Moodie Drive bird feeders were in need of volunteers to install and stock them over the winter. A call went out and many club members offered their time and talent to keep the feeders going. The feeders make the area one of the prime birding spots in Ottawa.

A donation from Mrs. Furness Thompson as a memorial for John Bird was sent to Council by Florence Bird. Council used the donation to buy a pair of binoculars for the Macoun Field Club. Mr. Bird was an avid supporter of the Macoun Club.

At the November meeting of Council, approval was given to the official appointment of Mrs. Lois Cody as Assistant to the Treasurer. This is the only paid position in the OFNC. Mrs. Cody was chosen from among three applicants, following publication of an advertisement in T&L for the position.

pine marten

Sheila C. Thomson

The foxy little face of the pine marten appeared suddenly between snowy branches of the young fir trees. Big-eyed, perky-eared, alert, he peeked out, hesitating, and then came loping gracefully over the snow toward the cabin. His winter coat was light yellow-brown, almost fox yellow, with softer yellow-buff underparts, and contrasted prettily with his dark brown paws and dark bushy tail. Altogether, I thought him the handsomest little wild creature that I had ever seen.

At the foot of a large maple tree he paused, then climbed the trunk like a cat. I watched him leap nine feet on to the roof of a bird feeder, and from there to a hanging suet log. Clinging upside-down on the suet log, he reached out with his forepaws, drew a hanging can of bacon dripping toward him, and fed on the frozen fat for several minutes.

Then, in the blink of an eye, he disappeared from the suet log and reappeared at the foot of the maple tree. Whether he leaped or ran the wire I could not say, although I thought I was watching his every move. In no hurry, the graceful little animal moved over the snow in weasel-like lopes, down the hillside and into the woods of Gatineau Park.

This first sighting was on December 13, 1970, at 10.15 in the morning. Two weeks later, on December 27, we suspected that the marten was still around when one of our children reported an unknown mammal "with a face like a gigantic weasel" peering out of a rock crevice at him. Later in the day, we glimpsed the pine marten bounding across the snow and into a clump of fir trees. Hoping for a better look at him, we followed him down the hill and stood gazing up into the thick evergreen branches where he had disappeared. Surrounded by curious naturalists, the marten expressed his annoyance by making angry little sorties out of his hiding place in the fir branches to peer down at us, scolding at us with curious little churring sounds. After several minutes we withdrew, as we had inadvertently cut off his escape. We did not see him again.

This sighting, belatedly reported, may be of interest, as we are not aware of other reported sightings of pine marten in the Gatineau Park area.

Macoun What's what

Sylvia McAllister

This year is proving to be one of the most successful the Macoun Field Club has ever had. (Our year begins in September.) The membership is large and very active; and, this being the Ottawa Field-Naturalists' Club's Centennial Year, we are planning special activities and projects to celebrate it. We took field trips in Pinhey Forest behind the Nepean Sportsplex, and in Pine Grove on Davidson Road. Pine Grove, being a suitably interesting area, was selected as a site for the project, an interpretive nature trail. The Club also plans to do a complete inventory of the Macoun Study Area on Moodie Drive, to be kept and added to for future reference.

Other field trips have been at Luskville, at the Gray's farm in Metcalfe to help construct a nature trail, and our second annual hiking trip in the Adirondack Mountains in New York over the Thanksgiving Day weekend.

We hiked in five miles over a ridge and established a base camp at John Brookes Lodge, and from there we hiked out in different directions. Accompanying us as leaders were Malcolm Hunter and Elisabeth Beaubien. We were surprised at the weather; one and a half days of crystal-clear sunshine, and the rest of the time it snowed. The total accumulation was only about two inches, but in places it drifted to over a foot deep - quite a contrast to Ottawa's mild weather at the time. Despite the sub-zero temperatures, the bears were still quite active; our food stores were raided two nights in a row, despite precautions.



ON TOP OF MT. MARCY



The bird life was fairly abundant, and we were especially surprised by the Boreal Chickadees - twelve of them at the same time. Some excitement was had over a small patch of dwarf horse-tail (dwarf scouring-rush) found growing near a stream, a first sighting for many of us.

Some of the peaks climbed were Big Seide, Yard Mountain, Gothic Mountain, and Wolf Jaw Mountain; and four more privileged Macouners joined the Mount Marcy clique. It was a very enjoyable trip and we were sorry to leave.

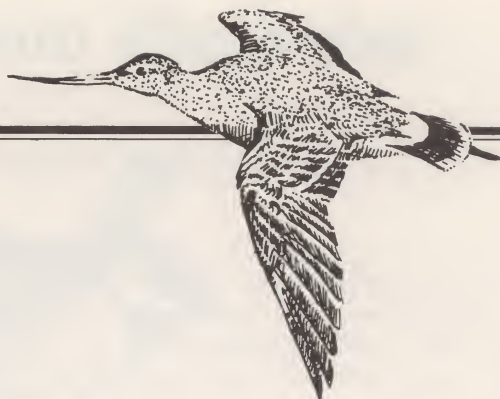
Over the past month, we have had talks by Aileen Merriam, from the NCC, about sites for our nature trail; and one by two of our members who worked at Georgian Bay Islands National Park this past summer. We reviewed the slides of the annual canoe trip, as well as having workshops and discussing plans for the upcoming year.

The Macoun Club year has started very well and to all appearances will continue very successfully.

Drawings by Bob Bracken

Birds of Fall 1978

by Stephen Gawn



September and October can be a very exciting time in which to birdwatch. This fall produced its share of rarities, with Forster's Tern, White-eyed Vireo and House Finch topping the list.

September's weather was about average and October for the most part was fairly pleasant. The Ottawa Field-Naturalists' Club held its annual fall count on September 10. Altogether 174 species were tallied. The most interesting find was that more than half of the total of 173,000 birds consisted of Starlings.

This fall there was a noticeable shortage of some of the western breeding birds such as Horned Grebe, Gadwall, Pintail, Canvasback, Redhead and Bonaparte's Gull. Hopefully this is due to weather conditions affecting migration paths rather than any decline in numbers.

Common Loons were low in numbers, and as pointed out, Horned Grebe sightings were very few. Cormorants were seen in the usual low numbers. A pair of Black-crowned Night Herons spent most of September at Britannia.

Canada Goose migration was a bit late in getting started but once it got under way it was a tremendous sight. Two Snow Geese lingered for a while, one at Shirley's Bay and the other at Ottawa Beach. There were few sightings of Brant. The regular puddle ducks were seen in regular numbers, but as was mentioned earlier, Gadwall and Shoveler were seen in poor numbers. The Barrow's Goldeneye returned to its regular haunt near Champlain Bridge for the seventh consecutive autumn. An amazing sighting of over a thousand scoters was made on October 14. Up to ten Ruddy Ducks could be seen at Shirley's Bay throughout the month of October.

Hawk numbers appeared low but this is probably due to few birders making an effort to watch migrating hawks. The only notable hawk reported was a subadult Golden Eagle on September 19.

Shorebirds quite often provide rarities, and the fall of 1978 was no exception. Two Western Sandpipers were seen. A Long-billed Dowitcher was at Munster Hamlet sewage lagoon on September 21. An incredible sight was the four Hudsonian Godwits along with 300 Pectoral and 41 White-rumped Sandpipers at Almonte sewage lagoons on October 22. Phalaropes were seen in low numbers; a single Wilson's on September 3, several Northern and two Reds, one on October 22 and the other on the following day.

The first Iceland Gull (one of the "white-winged" gulls) arrived on October 24. Surprisingly, only one Great Black-backed Gull was seen. A Caspian Tern was seen on September 4. The rarest bird of the fall was Ottawa's second Forster's Tern observed at Shirley's Bay on September 21.

This was a good fall for the three-toed woodpeckers. Numerous Black-backed Three-toeds were seen, and there were also a few reports of Northern Three-toeds. Flycatchers and swallows followed traditional practices and left early in the fall except for nine Rough-winged Swallows on October 14, a late sighting. Several Gray Jays appeared at feeders in October. Golden-crowned and Ruby-crowned Kinglets seem to be recovering from those harsh winters. October saw the arrival of Bohemian Waxwings.

It was a good fall for vireos. All the regular ones were recorded in good numbers with two sightings of the very uncommon Yellow-throated Vireo. One of the best finds of the period was a White-eyed Vireo which was present at Britannia from October 8 to 10. It was an average migration for warblers, with Yellow-rumped being the most predominant as usual, but after mid October even they became hard to find.

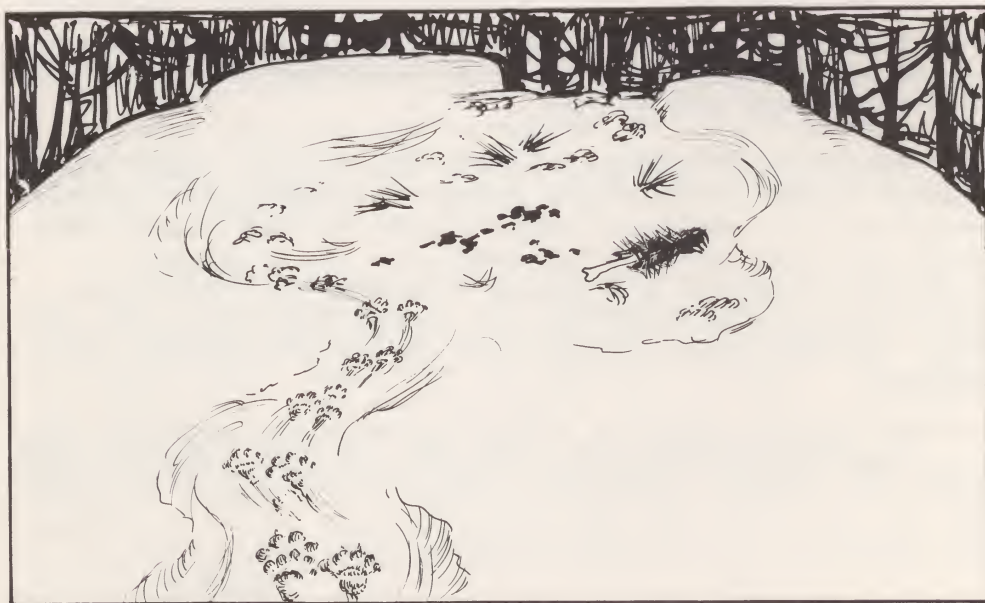
Blackbirds were in good numbers especially at their known roosts. Three Cardinals were present at Ottawa Beach. A late Rose-breasted Grosbeak was seen on October 21 and Evening Grosbeaks made their presence felt before the end of October. A House Finch was seen at Britannia on October 9. A late Field Sparrow was spotted on October 29. Towhee numbers were low this fall. By mid October Snow Buntings and Lapland Longspurs had arrived.

At time of writing four Snowy Owls and eight Gray Jays have been seen already. A sign of an interesting winter yet to come?

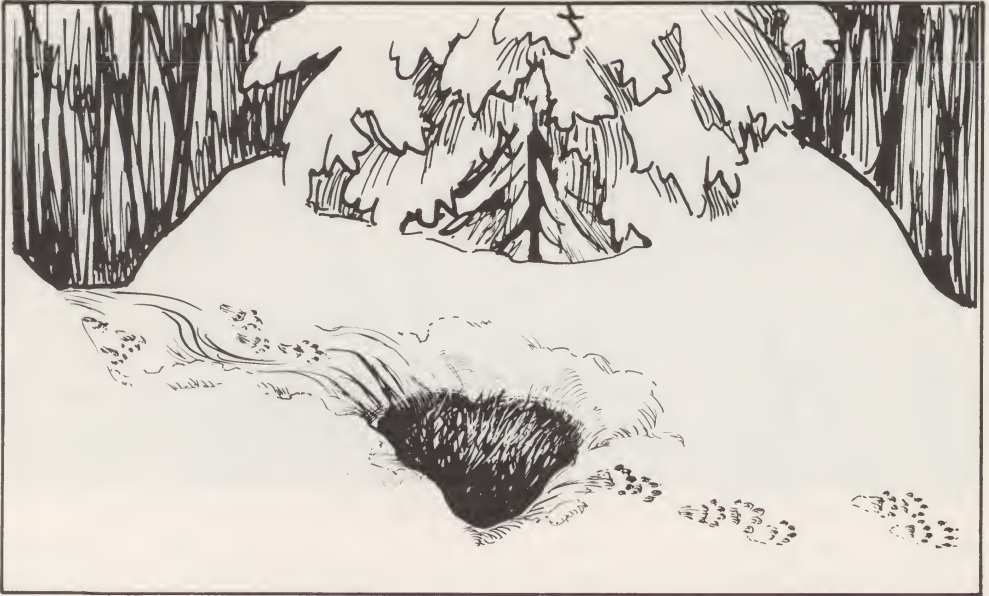
Simple Story in Snow



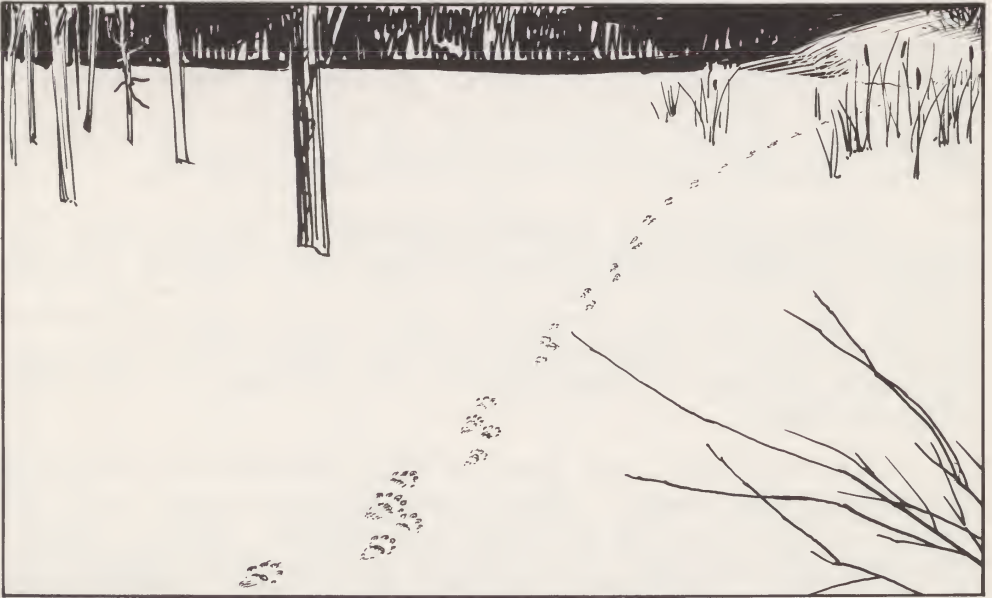
- 1 One cold January day we discovered and followed this winding, twisting track: footprints 5 or 6 cm wide, none too clear; drag marks as of a large brush-like object; spatters and drops of blood; and some coarse dark hairs.



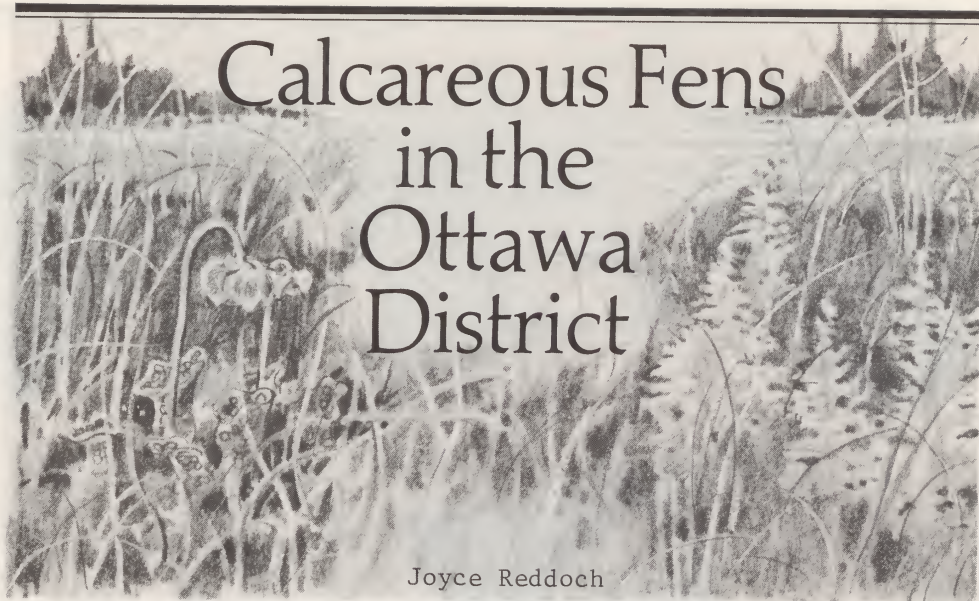
- 2 The trail mounted a small hummock to a trampled flattish area nearly a metre across. There we saw more blood and hair, also tufts of quills and the front leg, minus some meat but with the paw intact, of a porcupine.



- 3 About 4 m beyond the "dining room" we came upon the porcupine body. It had been pushed into a hollow beneath the snowdrift that had formed around the base of a young fir tree. Poking with a ski pole, we discovered that the carcase was still soft!



- 4 Tracks leading away from the hole across a nearby beaver pond were clearly those of a fisher. As they appeared so fresh, we speculate that our approach had surprised the animal at its meal, which it had hastily cached just before we came into view.



It finally dawned on me last summer that we have some significant fens in the Ottawa District (1), so I spent some time exploring them in the company of other naturalists. We found that although these fens are each one-of-a-kind, they have certain features in common. Each fen developed with the gradual invasion over open, still water of a floating mat made up of the entangled roots of some narrow-leaved sedges. As the mat became established, certain characteristic plants established themselves among the sedges, and peat formation began as each new season's growth covered over the remains of the previous year's plants.

A fen is a stage in wetland succession. The next stage is a bog. If *Sphagnum* (moss) builds up in a fen, the moss can direct vegetational succession toward bog formation by increasing the acidity (2). A bog is a peatland which is dominated by *Sphagnum* and which has acid-loving plant species. Further succession to bog forest may occur. Each step may take hundreds or even thousands of years.

A fen is a flat, open peatland with low vegetation dominated by narrow-leaved sedges. There is sometimes an extensive shrubby layer. A fen may or may not still be floating. When it is not floating, the water table reaches the surface in the spring and is not far below the surface the rest of the year. The substrate is almost totally organic - a dark-brown, sedge peat.

Depending on the influence of soils and bedrock, a fen may be acidic, neutral or basic. In the Gatineau, in areas of acidic rock, there are several small, acidic, lake-edge fens (3). An-

other acidic fen habitat occurs at the outer edges of the Mer Bleue Peat Bog. The number of plant species in acidic fens is generally relatively low.

By contrast, fens which have low acidity, or which are neutral or basic, generally have a rich flora. These types of fens usually occur in areas of calcareous bedrock (like limestone and marble) and are often referred to as *calcareous fens*.

I am going to describe the five calcareous fens presently known in the Ottawa District. In the Richmond Wetlands Complex in the Regional Forest (4), there are two fens, which I call the Richmond Fen and the Phragmites Fen. Both fens have completely filled in the basins in which they developed. The fen component of the Long Swamp is part of an interesting peatland complex which has formed at the headwaters of Cody Creek (5). Two lake-edge fens, one on Mud Pond (near Constance Lake) and the other near Poltimore, Quebec, are still-floating mats which are tending toward bog formation. All of these fens are part of wetlands complexes which include swamps and/or treed bogs.

These fens are rich in plant species which are rare or uncommon in the District. So far, 45 rare, 6 uncommon and 35 common species of vascular plants (6) have been identified (Table 1). We have probably found most of the abundant species and many of the occasional ones, but there may be other occasional species yet to record. About 2/3 of the species have a northern distribution across Canada, probably following the distribution of fens in the boreal zone. The remaining 1/3 have a more southern distribution which ranges from Ontario eastward.

Open, meadow-like fens which are dominated by narrow-leaved sedges are called *sedge fens* (or sometimes, misleadingly, graminoid fens (7)). Marsh Fern, Pitcher-plant, Buckbean, both Large and Small Cranberries, and Dyer's Bedstraw are usually quite common, as are the delicate Rush Aster and the golden-spiked Bog Goldenrod, which are most noticeable in late summer. Often there are species which we have seen in bogs, like Bog Rosemary, Labrador Tea, Pitcher-plant, Round-leaved Sundew and the cranberries.

In the more shrubby parts (often called a *low shrub fen* or shrub carr (7)), Sweet Gale is usually common. Several willows can occur, especially the rare Hoary Willow. Dwarf Birch, also rare, is the major taller shrub in and around the two fens in the Richmond Wetlands Complex.

Some species of mosses have very specific requirements for certain nutrients and for the degree of acidity. Most of the moss species in these fens (Table 2) are known as *calciphiles* (8) because they thrive where calcium ion concentration is high. This happens in calcareous areas where acidity is low (pH above 5.0). (The pH of water in our fens ranges from 6.5 to 7.5.) Because calcareous fens are rare in the District, the mosses specific to such fens are also rare. In fact, we discovered five new species



Orienting their way through the marshy border of the Richmond Fen are, from left to right, Albert Dugal, Courtney Gilliatt, Anne Courtier, Allan Reddoch, Anne Hanes and Gary Hanes.



The sedge fen habitat in the Richmond Fen is dotted with shrubs of Dwarf Birch, one of 25 rare species of plants which we have found here so far.

Photos by the author.

for the District in these fens (*Scorpidium scorpioides*, *Meesia triquetra*, *Rhizomnium pseudopunctatum*, *Cinclidium stygium* and *Sphagnum warnstorffii*). A sixth species, *Campylium stellatum*, was known previously only from a 1907 collection.

The four fens in Ottawa-Carleton are located in some of the conservation lands which all of us have been fighting for in the past months. These significant peatlands, which took hundreds or thousands of years to develop, must be preserved because they can not be replaced.

At the present time, all of the fens are being managed in the best possible way - they are being left alone. However! Much of the Phragmites Fen is owned by the Regional Municipality and is under the management of the Ministry of Natural Resources. We have heard that the Ministry's foresters plan to scarify the fen (that is to plough under the vegetation) and plant it with Black Spruce. Aside from the fact that Black Spruce will not thrive in a wet, calcareous environment, destruction of this unique peatland would be utter vandalism! A second bright idea from the Ministry is to flood the Richmond Fen to make it attractive to waterfowl. Does it make sense to destroy the special features of flora and fauna that are there now, to make a waterfowl area like others in the District? Not only do we in The Ottawa Field-Naturalists' Club have to work to get proper legal protection for these important fens, but we must also be their guardians against misguided management schemes.

The Richmond Fen

The fen constitutes the northern part of the Richmond Wetlands Complex in the Ottawa-Carleton Regional Forest (4). Naturalists first looked closely at the area in 1976 (9). Variouslly described as a bog or a marsh, the vegetation shows that it is indeed a calcareous fen. The area was under water for a short time a century ago while the Jock (Goodwood) River was dammed (10), but it has recovered and has developed into an important natural area. Most of its 2-km square surface is covered with low shrub fen consisting of Sweet Gale, Dwarf Birch and various willows, including the rare Bog Willow. The population of Dwarf Birch in the Richmond Wetlands Complex is the largest in the District.

There is a sedge fen component in the northeastern part of the Richmond Fen. Although it covers less than 1/4 of the total area, it is still a vast expanse. Along with the sedges, a grass (*Muhlenbergia glomerata*) and Water Horsetail are common. Among its rare flowering plants are Arrow-grass, Scheuchzeria and Prairie White Fringed-orchid (9). This orchid, which also grows in the Phragmites Fen 2 km to the south, is rare or endangered throughout its range (11). There are only five colonies known in Ontario.

The sedge fen is very wet. Stream-side species like Cattail, Turtlehead, Spotted Joe-pye-weed, Reed Canary Grass and White Snakeroot are surprisingly common. Except for the odd Pitcher-plant, we did not find any of the species we usually associate with bogs and which are in the other fens.

Of course, the Richmond Fen is already famous for its Yellow Rails, Short-billed Marsh Wrens, Willow Flycatchers and other wet-land birds. It is becoming famous among entomologists too. Last summer, two species of spiders were collected in the fen which were each known to science from only one previously collected specimen. Now, for the first time, these rare Arachnids can be studied to determine their life cycles and habitat preferences. The two species are *Clubiona angulata* (*Clubionidae*) and *Goneatara nasuta* (*Erigonidae*). Discovery of the latter is the first record for this species in Canada. In addition to the spiders, an interesting insect was collected in great numbers. It is a leafhopper which is an as-yet-undescribed species in the genus *Oncopsis* (*Cicadellidae*). The leafhopper, which feeds exclusively on Dwarf Birch, had previously been picked up in western North America and as far east as White River, Ontario. Now it can be studied close at hand by the entomologists at the Biosystematics Research Institute. Just imagine how many other rare species may remain to be discovered in the fen.

The Phragmites Fen

This fen lies in the southern part of the Richmond Wetlands Complex (12). It is an open, meadow-like area which extends for 2.7 km in a north-south direction and is only 200 metres wide. The sedge peat in the fen is at least two metres deep. Formation of this much peat must have taken a considerable period of time.

Local residents refer to the Phragmites Fen as "The Burn" because in the early days the farmers used to set the fen alight each fall to drive the deer out of the wetland and into the surrounding higher ground to be shot. Presumably the high water table prevented the fires from inflicting permanent damage to the fen.

Most of the fen is a sedge fen. Although the effect as you look at the broad fen surface is of a sea of knee-high grasses, there are actually very few grasses, except for the 2 1/2-metre high Common Reed Grass (*Phragmites communis*) for which the fen was named. This grass, which is, in fact, rare in the District, is scattered throughout the southern half of the fen and along the edges of the northern section. This is by far the largest stand of Common Reed Grass in the District. There is a small low shrub fen component in which Sweet Gale and Dwarf Birch are co-dominants. Hoary Willow and Bog Willow are also present. Dwarf Birch is also a major component of the adjacent swamp on the eastern boundary of the fen.

Other rare plants abound in the sedge fen. In the spring, the fen floor is covered with thousands of purple flowers of Northern Bog Violet. Far less conspicuous are the green efforts of Arrow-grass and Scheuchzeria. By mid-summer, the showy flowers are those of Prairie White Fringed-orchid and Rose Pogonia. Later on, the blue flowers of Kalm's Lobelia are abundant, while the white spirals of Hooded Ladies'-tresses are more spotty. Among the mosses, *Campylium stellatum* is dominant. A new moss for the District, and the first record for southern Ontario, *Cinclidium stygium*, was discovered here last summer by Gilda Trucco of the University of Ottawa.

A brief look at the insects of the Phragmites Fen has already yielded some important discoveries. Last August, Monty Wood and Don Lafontaine of the Biosystematics Research Institute erected a Malaisie insect trap in the fen. Specimens of several rare flies of the parasitic family *Tachinidae* were collected, among them *Clistomorpha didyma*, *Graphogaster slossonae*, *Mauromyia finitima*, *Pseudochaeta argentifrons*, and an undescribed species of *Phebellia*. The *Mauromyia* was formerly known only from one bog in Manitoba. *Clistomorpha* is a northern species collected only once before in the Ottawa area. Along with the flies, a large, conspicuous, black and white silkworm moth of the genus *Hemileuca* was collected for the first time in Canada. The moth resembles



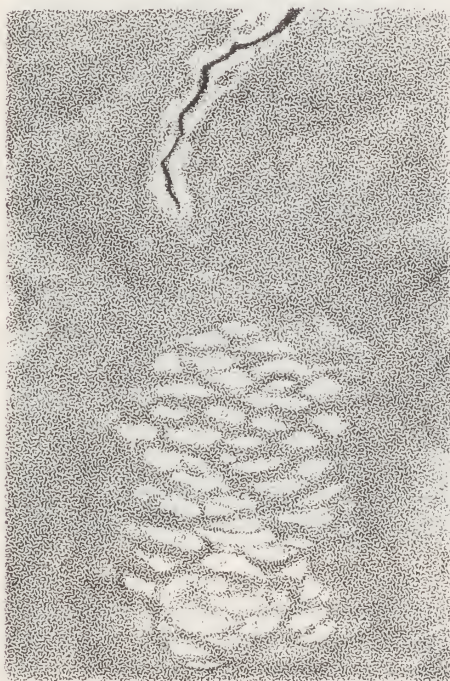
In the Phragmites Fen, in a stand of Common Reed Grass, is the Malaisie insect trap which Monty Wood and Don Lafontaine used last summer to collect their rare insects.

Hemileuca leucina, which is confined to the New England seaboard, but further study may show that it is a new species. The whole Richmond Wetlands Complex is of inestimable scientific value for both its flora and its fauna.

The Long Swamp Fen

The rich flora and many rarities in this fen were described last January in T&L (5). A unique feature of the peatland is the way the sedge fen habitat is arranged in a pattern of well-defined, elongated lenses aligned across the direction of slow water flow northward to Cody Creek. The lenses, which vary in size from 3 to 10 metres wide and from 10 to 100 metres long, are separated from each other by narrow bands of treed bog. This reticulate pattern of fen and treed bog is similar to patterns which have been observed in boreal peatlands (13), but which have not been known previously to occur this far south.

The sedges which constitute the main surface cover of the lenses include Hudsonian Club-rush and Lead-coloured Sedge; the latter species has not been found anywhere else in the District. In addition to the rare flowering plants already described (5), there can be added Hooded Ladies'-tresses, Kalm's Lobelia and Horned Bladderwort. The fen floor is rich in mosses, including two species which Anne Hanes found and which are new for the District, *Rhizomnium pseudopunctatum* and *Meesia triquetra*. Further north in the Long Swamp is a low shrub fen described in the previous article under the heading of shrub carr.



Left - the reticulate pattern of sedge fen and treed bog is shown in an aerial view. Cody Creek is at the top, flowing northward.

The Mud Pond Fen

The peatland at Mud Pond is a floating sedge mat which has covered the eastern end of the marly, 1/2-km square pond. The mat is 0.9 hectare in area and consists of two distinct vegetative zones. The major portion is a sedge fen dominated by White Beak-rush, Twig-rush and other sedges. The central part of the mossy floor consists entirely of *Sphagnum*, principally the calciphilic species *Sphagnum warnstorffii* and *S. squarrosum*. (The former's discovery here was the first record for the District.) Between the *Sphagnum*-floored section and the surrounding cedar-tamarack-ash swamp are other fen mosses, with *Campylium stellatum* dominating. Rose Pogonia, Grass-pink, Shrubby Cinquefoil, Cattail, Bog Goldenrod and other fen species are scattered throughout. Rose Pogonia is extremely abundant; there must be at least a thousand flowering plants.

The Mud Pond peatland is exhibiting the succession to bog which may take place in any fen. The sedge mat is becoming infiltrated with *Sphagnum*. This moss may eventually cover the whole floor and create an acidic environment which is the ideal habitat for acid-loving, bog species.

The second component of the peatland is a border of low shrub fen which has developed in a curious place between the sedge mat and the open water of the pond. Unlike the mat, which undulates as you try to walk on it, the border is rather firm. The dominant plants are Sweet Gale and 2-metre high Eastern White Cedar trees. Some other species in the border are Speckled Alder, willows, Paper Birch sapling, Red Osier, Winterberry, Leather-leaf, Red Maple sapling, Waterwillow, Swamp Rose and Shrubby Cinquefoil. Many of these species have not been seen in any of the other fens. How there came to be a shrubby border at the edge of the floating sedge mat is difficult to decide without further investigation. It may have formed over a pile of logs or an ancient beach on the pond bottom.

Before the property changed hands about ten years ago, the Mud Pond area was a favourite haunt of botanists (14) and birders. Now it is posted.

The Fen Near Poltimore, Quebec

This peatland has developed in a narrow inlet at the southwest end of a tiny (300-metre long) lake in an area of marble bedrock. It consists of a small sedge fen which is surrounded by a narrow band of cedar-black spruce-tamarack bog and a more extensive band of cedar-balsam swamp. The portion of sedge mat closest to the lake is still floating.

Most of the sedge mat is even more extensively infiltrated with *Sphagnum* than at Mud Pond, and several acid-loving Sphagna and other bog plants have established themselves in a few places around the edges. The rich sedge mat flora includes Hudsonian

Club-rush, Virginia Cotton-grass, White Bog Orchid, Rose Pogonia, Grass-pink, Marsh Cinquefoil, Pitcher-plant and Bog Rosemary. *Calliergonella cuspidata* and *Sphagnum warnstorfi* are the dominant mosses. This peatland is rather colder than our other fens, and I have noticed that the orchids come into flower a week or two later here than elsewhere.

This wetland is a real gem. The fen, bog and swamp are all rich in rare plants. In addition, this is one of the few places where the rare Pickerel Frog has been found in the District in recent years (15).

* * * * *

Acknowledgements: I am grateful to the following people for their information and helpful comments - George Argus, Albert Dugal, Jack Gillett, Anne Hanes, Gary Hanes, Bob Ireland, Don Lafontaine, Allan Reddoch, Gilda Trucco, David White and Monty Wood.

Voucher specimens of the vascular plants and the mosses collected during this study have been deposited in the National Herbarium of Canada (CAN and CANM).



The sedgy floor of the fen near Poltimore is surrounded by tamarack-cedar-black spruce bog and cedar-balsam swamp. In the foreground, nearest the lake, the sedge mat is still floating.

References and Footnotes

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TABLE 1
Vascular Plants of the Five Calcareous Fens (6)

Common Names	Botanical Names	Rich	Phra	L.S.	M.P.	Polt
Rare in the Ottawa District						
Bog Rosemary	<i>Andromeda glaucophylla</i>		XX	XX	XX	XX
Rush Aster	<i>Aster junciformis</i>	XX	XX	XX	XX	X
Flat-topped Aster	<i>Aster umbellatus</i>		X	X	X	
Dwarf Birch	<i>Betula glandulifera</i>	XX	X			
Grass-pink	<i>Calopogon tuberosus</i>			X	XX	XX
Woolly Sedge	<i>Carex lasiocarpa</i>	+	+		+	+
Mud Sedge	<i>Carex limosa</i>	+	+	+		+
Lead-coloured Sedge	<i>Carex livida</i>			+		
Few-flowered Sedge	<i>Carex pauciflora</i>	+		+		+
Stunted Sedge	<i>Carex paupercula</i>	+		+		
Twig-rush	<i>Cladium mariscoides</i>	X	XX		XX	
Waterwillow	<i>Decodon verticillatus</i>				X	
Three-way Sedge	<i>Dulichium arundinaceum</i>	X				X
Narrow-leaved Willow-herb	<i>Epilobium leptophyllum</i>	XX	X	X	X	X
Virginia Cotton-grass	<i>Eriophorum virginicum</i>				X	X
Green Cotton-grass	<i>E. viridi-carinatum</i>		X	X	X	
Dyer's Bedstraw	<i>Galium tinctorium</i>	XX	XX	X	X	
Sheep Laurel	<i>Kalmia angustifolia</i>		X			
Labrador Tea	<i>Ledum groenlandicum</i>		X	X	X	X
Kalm's Lobelia	<i>Lobelia kalmii</i>	XX	XX	XX		
Swamp Fly-honeysuckle	<i>Lonicera oblongifolia</i>	X	X	X	X	
Buckbean	<i>Menyanthes trifoliata</i>	XX	XX	XX		XX
Agglomerated Muhlenbergia	<i>Muhlenbergia glomerata</i>	XXX	X	X	X	X
Common Reed Grass	<i>Phragmites communis</i>	X	XX		X	
White Bog Orchid	<i>Platanthera dilatata</i>			XX		X
Prairie White Fringed-orchid	<i>Platanthera leucophaea</i>	XX	X			
Rose Pogonia	<i>Pogonia ophioglossoides</i>		X	XX	XXX	XX
Shrubby Cinquefoil	<i>Potentilla fruticosa</i>				X	
White Beak-rush	<i>Rhynchospora alba</i>	XX	XXX	XXX	XXX	
Swamp Rose	<i>Rosa palustris</i>				XX	
Hoary Willow	<i>Salix candida</i>	X	X	X	X	
Bog Willow	<i>Salix pedicellaris</i>	X	X			
Autumn Willow	<i>Salix serissima</i>			X	X	
Pitcher-plant	<i>Sarracenia purpurea</i>	XX	XX	XX	XX	XX
Scheuchzeria	<i>Scheuchzeria palustris</i>	X	X			
Hudsonian Club-rush	<i>Scirpus hudsonianus</i>			XX		XX
Three-leaved False Solomon's Seal	<i>Smilacina trifolia</i>		X	X	X	X
Bog Goldenrod	<i>Solidago uliginosa</i>	XX	XX	X	XX	X
Hooded Ladies'-tresses	<i>Spiranthes romanzoffiana</i>	X	X	X		
Arrow-grass	<i>Triglochin maritima</i>	X	X	X		
Horned Bladderwort	<i>Utricularia cornuta</i>			X		
Lesser Bladderwort	<i>Utricularia minor</i>	X		X		X
Large Cranberry	<i>Vaccinium macrocarpon</i>			X	X	X
Small Cranberry	<i>Vaccinium oxycoccus</i>		XX	XX	XX	XX
Northern Bog Violet	<i>Viola nephrophylla</i> (and f. <i>bicolor</i> Boivin)		XXX			
Uncommon in the Ottawa District						
Fringed Brome Grass	<i>Bromus ciliatus</i>	X	X	X		
Marsh Bellflower	<i>Campanula aparinoides</i>	X	X	X	X	
Leatherleaf	<i>Cassandra calyculata</i>			X	X	
Turtlehead	<i>Chelone glabra</i>	XX				
Loesel's Twayblade	<i>Liparis loeselii</i>	X				
Marsh Cinquefoil	<i>Potentilla palustris</i>	XX				X
Flat-leaved Bladderwort	<i>Utricularia intermedia</i>		X			

x occasional; xx frequent; xxx abundant (13); + present — status unknown

TABLE 1 (continued)

Common Names	Botanical Names	Rich	Phra	L.S.	M.P.	Polt
Common in the Ottawa District						
Red Maple	<i>Acer rubrum</i>				X	
Speckled Alder	<i>Alnus rugosa</i>				X	
Black Chokeberry	<i>Aronia melanocarpa</i>	X	X			
Paper Birch	<i>Betula papyrifera</i>				X	
Canada Bluejoint	<i>Calamagrostis canadensis</i>				X	
Water Arum	<i>Calla palustris</i>		X	X	X	X
Yellow Sedge	<i>Carex flava</i>	XX	XX		X	
Bulb-bearing Water-hemlock	<i>Circuta bulbifera</i>	XX	X	X	X	X
Red Osier	<i>Cornus stolonifera</i>			X	X	
Round-leaved Sundew	<i>Drosera rotundifolia</i>		X	X	XX	X
Water Horsetail	<i>Equisetum fluviatile</i>	XXX	X		X	
Spotted Joe-pye-weed	<i>Eupatorium maculatum</i>	XX	X	X		
White Snakeroot	<i>Eupatorium rugosum</i>	XX	X			
Common Strawberry	<i>Fragaria virginiana</i>			X	X	
Winterberry	<i>Ilex verticillata</i>				X	
Wild Iris	<i>Iris versicolor</i>	X	X	X	X	X
Tamarack	<i>Larix laricina</i>	X		X	X	X
Cut-leaved Bugleweed	<i>Lycopus americanus</i>	X	X			X
Northern Bugleweed	<i>Lycopus uniflorus</i>	X	X			X
Sweet Gale	<i>Myrica gale</i>	X	XX	X	X	X
Royal Fern	<i>Osmunda regalis</i>	X	XX	X	X	
Reed Canary Grass	<i>Phalaris arundinacea</i>	X				
Black Spruce	<i>Picea mariana</i>			X		
Alder-leaved Buckthorn	<i>Rhamnus alnifolius</i>	X	X	X	X	
Dwarf Raspberry	<i>Rubus pubescens</i>	X	X	X	X	
Bebb's Willow	<i>Salix bebbiana</i>	X				
Star-flowered False Solomon's Seal	<i>Smilacina stellata</i>		X	X		
Giant Goldenrod	<i>Solidago gigantea</i>	X	X		X	
Meadowsweet	<i>Spiraea alba</i>	X	X			
Tall Meadow-rue	<i>Thalictrum polygamum</i>	X	X		X	
Marsh Fern	<i>Thelypteris palustris</i>	XX	XXX	XXX	XXX	XX
Eastern White Cedar	<i>Thuja occidentalis</i>		X	X	X	X
Marsh St. John's-wort	<i>Triadenum virginicum</i>	X	X	X	X	
Cattail	<i>Typha latifolia</i>	XX			XX	
Violet species	<i>Viola sp</i>			X	X	X

TABLE 2

Mosses of the Five Calcareous Fens (16)

Moss Species	Calciphiles	Rich	Phra	L.S.	M.P.	Polt
<i>Campyllum stellatum</i>	C	+	+	+	+	+
<i>Drepanocladus vernicosus</i>	C	+	+	+	+	+
<i>Calliergonella cuspidata</i>	C	+	+	+	+	+
<i>Scorpidium scorpioides</i>	C		+	+		
<i>Meesia triquetra</i>	C			+		+
<i>Tomenthypnum nitens</i>	C			+		+
<i>Rhizomnium pseudopunctatum</i>	C?			+		
<i>Cinclidium stygium</i>	C		+			
<i>Campyllum chrysophyllum</i>			+	+		
<i>Calliergon giganteum</i>	C	+	+			+
<i>Thuidium recognitum</i>	C		+	+		
<i>Thuidium delicatulum</i>		+		+		
<i>Fissidens adiantoides</i>		+		+		
<i>Aulacomnium palustre</i>		+	+	+	+	+
<i>Sphagnum squarrosum</i>	C				+	
<i>Sphagnum teres</i>	C					+
<i>Sphagnum warnstorffii</i>	C			+	+	+

x occasional; xx frequent; xxx abundant (13); + present - status unknown

Conservation Lands Study ~ Update

Joyce Reddoch

It appears now that the public hearings on Conservation Lands in the Regional Official Plan will be held no earlier than January. First, the new Planning Committee, elected last November, must become acquainted with the situation, and hopefully it will rework some of the absurd proposals of its predecessor. The future of the Conservation Lands continues to be grave as politicians muddle their way through the process. We will let you know when the hearings are to take place.

In the meantime, have you written or phoned your (new) Regional representatives yet, to tell them you support conservation of our important natural areas? If you haven't, try to find time to do so right away. Your letters and phone calls count.

THEY'RE READY NOW at Nature Canada Bookshop, 75 Albert St., and the Boutique, Victoria Memorial Museum, Metcalfe and McLeod Streets

CHECKLIST OF VASCULAR PLANTS OF THE OTTAWA-HULL REGION, CANADA, compiled by J.M. Gillett and D.J. White - \$3.50
(CNF and FON members' price is \$3.15 at Nature Canada Bookshop.)

FERNS OF THE OTTAWA DISTRICT revised edition, by W.J. Cody - \$3.25
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Audubon Screen Tours

A series comprising some of the best films available on wildlife and wilderness. Admission is free.

January 31 WHERE THE SEA BEGINS William J. Jahoda

February 28 SONG OF THE NORTHERN PRAIRIE Allen King

8 p.m. in the Auditorium of the Victoria Memorial Museum
Metcalfe and McLeod Streets

OFNC EVENTS IN JANUARY AND FEBRUARY

NATURAL HISTORY IN WINTER : Excursions by bus, snowshoe or cross-country ski, and evening talks and films, arranged by the Excursions and Lectures Committee.

Tuesday
January 9

ANNUAL BUSINESS MEETING

Meet: Auditorium, National Museum of Natural Sciences, Metcalfe and McLeod

Time: 8 p.m.

If time permits, two or three short films will be shown after the business meeting.

Sunday
February 6

WINTER BIRDS IN THE OTTAWA AREA

Leader: Steve O'Donnell (826-2561)

Assistant: Ian Davidson

Meet: Loblaws, Carlingwood Shopping Plaza

Time: 8 a.m.

This will be a bus trip, lasting about four hours, to seek out the birds spending the winter in our area. The cost will be \$2.50 per person or \$5.00 per family.

Tuesday
February 13

A LOOK AT COLUMBIA

Speakers: Jo Ann Murray and Hue MacKenzie 226-1997

Meet: Auditorium, National Museum of Natural Sciences, Metcalfe and McLeod

Time: 8 p.m.

Two naturalists share their experiences in the Central West Andes of south Columbia. Then they take us up into Amazonia for a glimpse of that fascinating world.

Sunday
February 11

WINTER LANDSCAPE AND SNOW INTERPRETATION

Leader: Isabel Bayly 231-3886 office, 827-2364 home

Time: 10 a.m. and for two or three hours duration

This will be a trip on SNOWSHOES. All persons wishing to go on the outing must contact the leader at above phone number beforehand for full details and meeting place. Dress warmly.

Sunday
February 25

CROSS-COUNTRY SKI TRIP TO INTERPRET ANIMAL TRACKS

Leaders: Harry and Sheila Thomson 234-0845

An all-day outing in the area of Mount St. Patrick. All persons wishing to go must phone the leaders at the above number by Thursday 22 February to arrange further details.

DEADLINE : March issue material to Editor by January 14, please!

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